Application No.: 10/588,840

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

1-10. Cancelled

11. (Currently Amended) A plant nutrient reduction system composition comprising:

a microbially enhanced inorganic fertilizer composition for application to a plant comprising,

a nitrogen:phosphorus: potassium (N:P:K) ratio wherein nitrogen is from 0 to about 32, phosphorus is 0 from 0 to about 13, and potassium is from 0 to about 12, wherein at least one of nitrogen, phosphorus or potassium is at least about 2, and

at least about 1 x 10<sup>5</sup> microorganisms per gram of fertilizer composition, <u>said</u> microorganisms selected from the group consisting of *clostridium pasteurianum*, *Rhodopseudomonas capsula*, *Bacillus megaterium*, *Bacillus subtilis* and combinations thereof and said microorganisms being encapsulated in a water-soluble coating in the form of microcapsules, wherein the application to a plant of the microbially enhanced inorganic fertilizer composition in an amount at least 25% less by weight than the application to a plant of a nonmicrobially enhanced inorganic fertilizer composition, results in comparable plant growth or yield in an equivalent time period.

- 12. (Currently Amended) The system composition of Claim 11 wherein the N:P:K ratio comprises nitrogen from about 6 to about 32, phosphorus from about 4 to about 13, and potassium from about 3 to about 12.
- 13. (Currently Amended) The system composition of Claim 11 wherein the microorganisms are present from at least about 1x 10<sup>5</sup> to about 5 x 10<sup>7</sup> microorganisms per gram of fertilizer composition.

Application No.: 10/588,840

14. (Cancelled)

15. (Currently Amended) A plant nutrient reduction system composition comprising:

a microbially enhanced inorganic fertilizer composition for application to a plant comprising,

a nitrogen:phosphorus: potassium (N:P:K) ratio wherein nitrogen is from 0 to about 32, phosphorus is 0 from 0 to about 13, and potassium is from 0 to about 12, wherein at least one of nitrogen, phosphorus or potassium is at least about 2, and

at least about 1 x 10<sup>5</sup> microorganisms per gram of fertilizer composition, <u>said</u> microorganisms being encapsulated in a water-soluble coating, wherein the application to a plant of the microbially enhanced inorganic fertilizer composition in an amount at least 25% less by weight than the application to a plant of a nonmicrobially enhanced inorganic fertilizer composition, results in comparable levels of nitrogen, phosphorus, or potassium in the plant.

- 16. (Currently Amended) The system composition of Claim 15 wherein the N:P:K ratio comprises nitrogen from about 6 to about 32, phosphorus from about 4 to about 13, and potassium from about 3 to about 12.
- 17. (Currently Amended) The system composition of Claim 15 wherein the microorganisms are present from at least about  $1 \times 10^5$  to about  $5 \times 10^7$  microorganisms per gram of fertilizer composition.

18. (Cancelled)

19. (Currently Amended) The system composition of Claim 15 wherein the application of the microbially enhanced inorganic fertilizer composition in an amount at least 25% less by weight than the application to a plant of a nonmicrobially enhanced inorganic fertilizer

3

Application No.: 10/588,840

composition further results in comparable plant growth or yield in an equivalent time period.

20. (Currently Amended) A plant nutrient reduction system composition comprising:

a microbially enhanced inorganic fertilizer composition for application to a plant comprising,

a nitrogen:phosphorus: potassium (N:P:K) ratio wherein nitrogen is from 0 to about 32, phosphorus is from 0 to about 13, and potassium from 0 to about 12, wherein at least one of nitrogen, phosphorus or potassium is at least about 2, and

at least about 1 x 10<sup>5</sup> microorganisms per gram of fertilizer composition, said microorganisms being encapsulated in a water-soluble coating, wherein the application to a plant of the microbially enhanced inorganic fertilizer composition in an amount at least 25% less by weight than the application to a plant of a nonmicrobially enhanced inorganic fertilizer composition, results in residual levels of nitrogen, phosphorus, or potassium in the soil substantially less than that which results from the application to a plant of a non-microbially enhanced fertilizer composition.

- 21. (Currently Amended) The system composition of Claim 20 wherein the N:P:K ratio comprises nitrogen from about 6 to about 32, phosphorus is 0 from about 4 to about 13, and potassium from about 3 to about 12.
- 22. (Currently Amended) The system composition of Claim 20 wherein the microorganisms are present from at least about  $1 \times 10^5$  to about  $5 \times 10^7$  microorganisms per gram of fertilizer composition.

## 23. (Cancelled)

24. (Currently Amended) The system composition of Claim 20 wherein the application of the microbially enhanced inorganic fertilizer composition in an amount at least 25% less by weight than the application to a plant of a non-microbially enhanced inorganic

Application No.: 10/588,840

fertilizer composition further results in comparable plant growth or yield in an equivalent

time period.

25. (Currently Amended) The system composition of Claim 20 wherein the application of

the microbially enhanced inorganic fertilizer composition in an amount at least 25% less

by weight than the application to a plant of a non-microbially enhanced inorganic

fertilizer composition results in comparable levels of nitrogen, phosphorus, or potassium

in the plant.

26. (New) The composition of Claim 11, wherein the microorganisms are encapsulated in

a water-soluble coating.

27. (New) The composition of Claim 15, wherein the microorganisms are selected from

the group consisting of clostridium pasteurianum, Rhodopseudomonas capsula, Bacillus

megaterium, Bacillus subtilis and combinations thereof.

28. (New) The composition of Claim 15, wherein the microorganisms encapsulated in a

water soluble coating is in the form of microcapsules.

29. (New) The composition of Claim 20, wherein the microorganisms encapsulated in a

water soluble coating is in the form of microcapsules.

5